Minutes of the
Agriculture, Natural and Cultural Resources Element Subcommittee

Thursday, February 3, 2005

Jim Siepmann, Chairperson, called the meeting to order at 9:06 a.m.

Subcommittee Members Present

- Jim Siepmann – Comprehensive Development Plan Advisory Committee Representative
- Ellen Gennrich - Waukesha County Land Conservancy
- Elaine Kraut - Town of Summit Park Board, Mineral Extraction Industry
- Tom Oberhaus - Town of Delafield Plan Commission, farmer
- Bob Bartholomew - Town of Vernon Plan Commission, farmer
- Barb Holtz - Town of Mukwonago Board, farmer
- Bruce Kaniewski - Comprehensive Development Plan Advisory Committee Representative
- Steve Schultz - Ruekert and Mielke
- Bob Miller – Farmer/Town of Oconomowoc
- Beth Leonard - City of Delafield Park and Recreations Commission
- Paul Sandgren - Wisconsin Department of Natural Resources
- Rob Fox – UW/Extension Agricultural Agent
- Bill Kolstad - City of Brookfield Parks Department
- Jeff Herrmann - Comprehensive Development Plan Advisory Committee Representative

Subcommittee Members Absent:

- Don Reed – Southeastern Wisconsin Regional Planning Commission

Staff Contacts:

- Dale Shaver, Director - Waukesha County Department of Parks and Land Use
- George Morris, Environmental Health Manager, Waukesha County Dept. of Parks and Land Use
- Richard Mace, Planning and Zoning Manager - Waukesha County Department of Parks and Land Use
- Kathy Moore, Senior Planner - Waukesha County Department of Parks and Land Use
- Sandy Scherer, Senior Planner - Waukesha County Department of Parks and Land Use
- Don Dittmar, Land Information Systems Manager
- Jim Kavemeier, Parks System Manager, Waukesha County Department of Parks and Land Use
- Mike Radomski, Environmental Health Supervisor
- Mark Mader, Legislative Policy Advisor
- Perry Lindquist, Land Conservation Manager

Other Interested Parties

- Russ Evans, Town of Genesee
- Marlin Johnson, Waukesha County Land Conservancy
- Wally Thiel, Village of Hartland
- Lisa Conley, Village of Lac La Belle
- Karen McNelly, Town of Mukwonago Plan Commission
- Colin Butler, Town of Ottawa Plan Commission
- Harlan Clinkenbeard, City of Pewaukee
- Ezra Meyer, Friends of the Mukwonago River
- Pamela Meyer, Friends of the Mukwonago River
- Nancy Gloe, Friends of the Mukwonago River

- Bob Schowalter, Town of Oconomowoc Resident
- Tom Day, Town of Eagle Resident

Public Comment
None.

Approval of the October 14, 2004 and December 9, 2004, Minutes

- ***Mr. Schultz moved, seconded by Mr. Oberhaus and carried unanimously, for approval of the October 14, 2004, Minutes.***

It was decided to defer approving the December 9, 2004 Minutes, until the next meeting of the Subcommittee after the language on Page 4 is revised.

Groundwater Study Overview
Mr. Biebel from SEWRPC presented a PowerPoint presentation, which included the overview/background of water supply issues in the region and Waukesha County. Items covered in the presentation include: regional settings, water supply issues, the regional water supply planning program and integration of water supply planning with comprehensive planning. He presented a map indicating the areas in Southeastern Wisconsin (including Waukesha County), which are served by public and private water supply. Regarding the general hydrogeology of southeast Wisconsin, he explained that most of the private wells are located in the sand and gravel aquifer that is the shallowest (nearest to the surface) and varies in depth to a maximum 400' to 500' in some locations. Below the sand and gravel aquifier is the Silurian dolomite acquifer, and in most of the County below that is the Maquoketa aquitard (a relatively impermeable material) which prevents significant amounts of rainfall from penetrating to the next level known as the deep sandstone aquifer.

Issues concerning the water supply in southeastern Wisconsin, including Waukesha County include:

Deep Aquifer System

- Quantity-Historic and continued drawdown of up to four to five feet per year.
- Quality-Concerns related to Radium concentrations, which exceed the current State standard and dissolved solids. Twenty-two systems in southeastern Wisconsin have a supply of water, which exceeds the Radium levels allowed and must be resolved, generally by December 2006. In some cases the concentrations of Radium, as well as dissolved solids tend to increase in some wells as the water level drops. This is a naturally occurring problem, not due to contamination.

Shallow Aquifer System

- Quantity-Currently very limited problems (in Waukesha County) due to seasonal and longer-term dry weather conditions.
- Future Quantity-Sustainability and potential surface water and wetland base flow impacts if uses greatly increase, particularly if the shallow aquifer is used as an alternative to the deep aquifer to solve the Radium issues.
- Surface Water Conflicts-New well siting and surface water advocates and existing groundwater users.
- Quality-Isolated problems- There are arsenic concerns in six municipal systems (not in Waukesha County). The DNR has required 24 special well casing requirements due to contamination in the shallow groundwater system (spills of volatile/organic compounds or gasoline type, nitrate issues, bacterial issues).

A member of the audience asked how many lakes in Waukesha County are groundwater fed? Mr. Biebel replied there are a fair number of primarily groundwater fed lakes, however, he was unsure of he exact total. Mr. Clinkenbeard asked when the regional groundwater study is expected to be completed so the finding could be integrated into the plan? Mr. Biebel replied, the study is anticipated to be completed by the end of 2006, with preliminary data available by mid 2006.

Lake Michigan Supply

Treated water is an ample, high quality source. The use is constrained by diversion laws and policies. Mr. Biebel presented a chart showing the capacity and use of Lake Michigan water treatment plants (nine located in Milwaukee County). He indicated there are 200 million gallons a day of excess capacity in those plants and pointed out that all of the water use in the region from groundwater is less than 100 million gallons a day. In Waukesha County water usage is approximately 40 million gallons per day.

Great Lakes Charter Annex 2001 Considerations

Mr. Biebel explained these are rules being developed by the Counsel of Great Lakes Governors for the basis for which someone could obtain a withdrawl from Lake Michigan. As the draft rules are currently written, to use Lake Michigan water you must return the flow to Lake Michigan. He said while there are many issues, he did not want to give the impression that at this point, there is a crisis in Waukesha County. There are solutions and alternative solutions, and all of the local communities involved are in the middle of planning ways to resolve the issues. In the long term, tools should be developed, along with management measures to integrate with land use decisions.

Regional Water Supply Planning Program

There are three elements, which comprise the planning program.

First Element, Basic Groundwater Inventories:

- Conduct basic groundwater inventories – Completed in 2001, basic groundwater and geologic information was gathered to support the subsequent activities and provide framework for certain activities which could be dealt with.
- Collect additional inventory data and develop a regional groundwater simulation model – completed in 2004
- Prepare regional water supply system plan-final step, which is currently being initiated

He presented maps showing the depth to bedrock in southeastern Wisconsin, the generalized water table elevation and groundwater contamination potential.

Second Element Groundwater Model Development:

- Understand present groundwater system
- Study current and future impacts of groundwater use
- Water supply plan-simulate alternative management options
- Delineate contributing areas for wellhead protection
- Provide a framework for site specific models and studies

He presented maps showing the simulated deep water levels from pre-1864 to 2010-2020.

Cone of Depression: The Milwaukee/Chicago Cone of Depression is one of the largest areas of groundwater drawdown in North America. Impacts of the drawdown show that historically the groundwater flow in the region and Waukesha County previously was west to east flowing to or under Lake Michigan. Currently, because of the drawdown, the water from the east and Lake Michigan (and under Lake Michigan) flows to the west toward the drawdown basically reversing the groundwater flow patterns. The major pumping center in southeastern Wisconsin has shifted from the City of Milwaukee to eastern Waukesha County. The center of the Cone of Depression in the deep part of the flow system has shifted westward, approximately eight miles from Milwaukee to near the Village of Elm Grove where deep water levels have dropped approximately 500' since the onset of pumping. A member of the Subcommittee noted another impact is that water doesn't stop at the Waukesha County border. If all of the wells were shut off in Waukesha County, the water begins to flow back toward the Lake Michigan basin, but then flows south towards Chicago because of their usage. Mr. Biebel agreed and said it does impact our area substantially.

Third Element – Proposed Regional Water Supply Plan

- Development of water supply service areas and forecast demand for water use – estimates to 2035
- Development of recommendations for water conservation efforts to reduce water demand
- Evaluation of alternative sources of supply, culminating in identification of recommended sources of supply for each service area and recommendations for development of the basic infrastructure required to deliver the supply
- Identification of groundwater recharge areas to be protected from incompatible development-mapping
- Specification of any new institutional structure found necessary to carry out the plan recommendations-rely on existing systems
- Identification of any constraints to the development levels in subareas of the region that may emanate from water supply sustainability concerns

Mr. Biebel noted because of our location, there are a number of solutions (Lake Michigan, potential for shallow wells and/or treatment). It is important to look at the problems on a regional basis and explore the impacts and alternative sources of supply.

Mr. Shaver said the philosophy of creating the process includes 28 out of 37 municipalities. The goal is not only to create a joint vision, but define those issues which are local in nature. The municipalities would be responsible for identifying/addressing those issues which are Countywide and of regional importance and be responsible for solutions. The County would work into the planning process in the land use perspective. A member of the Subcommittee noted, that regarding the regional look into groundwater and surface water resources is how they can best be managed in a sustainable and reasonable manner (impacts on wetlands, etc.). Mr. Lindquist noted in the process of updating the Stormwater Ordinance for the County, a guiding principle deals with the protection of groundwater recharge areas. This process could help identify where those areas are located and standards which apply to those areas would be helpful in updating the Ordinance.

<u>Water Supply and Comprehensive Planning - Linkages</u>

- Land Use Element – A compilation of objectives, policies, goals, maps and programs to guide the future development and redevelopment of public and private property. The element should include a series of maps which show current and future land uses which indicate productive agricultural soils, natural limitations for building site development, floodplains, wetlands and other environmentally sensitive lands. There should be mapping of the boundaries of the areas, which would be provided with public utilities including water supply.

- Utilities and community facilities element – A compilation of objectives, policies, goals, maps and programs to guide the future development of utilities and community facilities in the local governmental unit such as sanitary sewer service, stormwater management and water supply. The element shall describe the location, use and capacity of existing public utilities and community facilities which serve the local governmental unit and shall include an approximate timetable which forecasts the need in the local governmental unit to expand or rehabilitate existing utilities and facilities or to create new utilities and facilities. The plan should look at the current capacities of the utility systems and the future needs of those systems and include a future plan when new systems would be developed and come into place. This may require the development of a Utility/Facility Plan.
- Agricultural, natural and cultural resources element – A compilation of objectives, policies, goals, maps and programs for the conservation and promotion of the effective management of natural resources such as groundwater, forests, productive agricultural areas, environmentally sensitive areas, surface water, floodplains, wetlands, etc.
- Opportunity to integrate water supply and other utility planning with land use and other comprehensive plan elements at the regional, County and local levels. Taking into account important water supply considerations in establishing land use patterns by preserving important groundwater recharge areas, protect existing and future well zone of contribution areas, promote local zoning to protect areas most susceptible to groundwater contamination, promote low impact and other development patterns and stormwater management practices which maintain the natural hydrology, potential limits to develop density in selected areas to help achieve a safe water supply and water conservation.

Mrs. Gennrich asked, since the groundwater model is finished, has the information been published? Mr. Biebel replied, there is a document which includes three reports (two reports document the model and the demonstration analysis of the model) which have been drafted and reviewed by Committee and are currently being put in final form. A technical report, which will include all three reports should be available within the next 90 days which should be able to be downloaded from the USGS or SEWRPC website.

Discussion of Prime Agricultural Land Designation

Mr. Shaver said the current Waukesha County Development Plan identifies Prime Agricultural lands as being 35-acre parcels, Class I and II soils and part of a five sq. mile block. Mr. Rose pointed out on the aerial map Prime Ag areas in the County, which were taken away due to development (subdivisions, condominiums, CSMs). Mr. Shaver noted that since parcel sizes should be 35 acres or more, there have been land divisions and 35-acre parcels created (which comply with the 35-acre minimum parcel size) as CSMs which may or may not be farmed. He wondered if the Subcommittee would like to spend time discussing the three criteria's for Prime Ag lands. The 35-acre standard is somewhat fixed in the State Farmland Preservation Code. There may be some value in adding additional marginal soils to what is currently Prime Ag soils and there may be room for further discussion regarding the five sq. mile block size. Discussions with the Town and City of Oconomowoc could include whether the northern half of the Town would continue to be Prime Agricultural. If so, a planning objective could be created to discuss what tools would be needed to make it happen.

Mr. Herrmann, Town of Oconomowoc Planner, said the Town Plan Commission discussed the Prime Ag definition. The Town has decided that currently, the area north of C.T.H. "K" and north of the bypass would try to be preserved as Prime Ag. lands (35 acre density, Class I and II soils). Regarding the definition of Prime Ag soils and lands and the 35-acre standard, the Plan Commission does not wish to see it more restrictive than it currently is, however, if it were to change they would like to be involved. He reiterated, the current plan is to preserve everything north of C.T.H. "K" and north of the bypass. The Town is

establishing a Committee to look at the area around the bypass which should take place in early March 2005.

Ms. Moore said a concern is the Peripheral Area for the City of Oconomowoc's Land Use Plan which goes beyond C.T.H. "K" to Monterey. The City should be contacted as to why their Land Use Plan conflicts with the Peripheral Planning Area because the Plan may have to be incorporated into the County's. Mr. Shaver said there could be conflicting visions between the City and Town, and the staff will contact both the City and Town to clarify their land use vision. Mrs. Gennrich asked if it should be determined whether a goal of this County community is preserving agriculture and how to accomplish it? Mr. Shaver replied, "Yes," and it would become an objective in the Subcommittee's planning process. Mr. Herrmann noted that in the Town of Oconomowoc most of the farmers don't own the land they farm.

Meeting Times and Dates

Mr. Shaver suggested the next Subcommittee meeting be held on Thursday, April 7, 2005, from 9:00 a.m. to 11:00 a.m. Topics for the next meeting may include:

- Approval of the December 9, 2004 and February 3, 2005, Minutes.
- Analysis of the February 3, 2005, discussion and have the Subcommittee give direction as to how the Agricultural analysis should proceed.
- Draft Chapter on agricultural and natural resource feature (soils, geography, geology, topography, etc.)
- Non-metallic recommendations for buffering
- Regional Water Quality Management Planning Overview - Beibel

Mrs. Gennrich moved, seconded by Mr. Bartholomew and carried unanimously, to adjourn the meeting at 11:00 a.m.